

Meeting Description: Michigan Geographic Framework Users Meeting

Date: November 12, 1998 **Time:** 10:00 a.m.

Location: Lewis Cass Bldg., 6th Floor, North Wing, Dept. of Management and Budget, Director's Conference Room

Scheduled Time			Actual Time		
Start	Stop	Total Hours	Start	Stop	Total Hours
10:00 a.m.	12:00 p.m.	2	10:00 a.m.	12:00 a.m.	2

I. Geographic Framework Program

A. MIC Project Update

1. MALI to GIS Conflation (Phase 2a) Status

Rob Surber, MIC, distributed a status map focusing on Phase 2. Eaton and Otsego counties are the most recently completed. Seven counties are still being worked on and eleven counties are completely through the Phase 2a process - many roads (public and private) are identified, named according to the most recently available source materials, mile posted, measurements and physical reference (PR) numbers are assigned to roads. A change transaction file is made for all changes made to MALI. The MIC delivered a couple of counties to MDOT this week and they expect to deliver Eaton and Otsego counties by the end of this week or the beginning of next week.

2. 1998 TIGER

Rob Surber, MIC, stated that 1998 TIGER has been released. The MIC sent out QVF (Qualified Voter File) maps for the state and those maps were filled out by clerks and brought back to our office for input back into the program. The maps were also sent to the U.S. Bureau of the Census and the 1998 TIGER reflects of that work. For the majority of the counties, the work that the clerks did is on this 1998 TIGER. This is being used as a cross check validation by bringing it into the framework. It is an important validation tool, which is on screen as opposed to looking at paper maps. This will give us an idea as to how well the Bureau did and will also point out potential problem areas they might have missed. The MIC hopes to be able to work with the Bureau to correct problems.

3. County Seaming

Rob Surber, MIC, reported that the MIC has started to work with the county seaming process. This is more involved than it may appear. There are a finite number of county lines. The data along the county lines has been very muddy in the past. Most data has been collected on a county by county basis for MDOT and MDNR. The MIC is now looking at what will be needed to clean it up. They will be documenting procedures and keeping a detailed record of any changes made. There is a need for integrating information across the county line, whether it is for transportation modeling, environmental work, routing, etc. They are working on topologically bringing the counties together on the base map. There is a lot of TIGER data that has to be moved around. The end result will be only one line representing the county line, only one PR (physical reference) number, one set of road names, and one set of addresses. They are currently in the beginning stages of work on Hillsdale and Lenawee counties. Rob will continue to give updates.

B. Framework Update and Maintenance

1. U.S.P.S. Matching Program

Rob Surber, MIC, reported that the MIC is trying to keep up with U.S.P.S. as they develop a monthly process to look for changes in the product. It will compare new ZIP+4 CDs to last month's product and will identify new roads and changes in addressing. This will be input into monthly updates and the ongoing maintenance of the framework. One of the U.S.P.S. districts in Michigan is supplementing this product (a national product from Memphis) with locally produced maps that are sent to them from Postmasters. U.S.P.S. is finding that there are no standards for maps coming in and they have to then do a lot of interpretation. There is a stack of changes since last April to be input into the transportation base and attributes associated to the roads. So far it's been working well. It is a good starting point for doing research.

C. SEMCOG

Delores Muller, SEMCOG, distributed a current status update of the Michigan Geographic Framework in Southeast Michigan. They are working on the conflation and conflation cleanup stages. The Linear Referencing System (LRS) and TIGER update cleanup has been completed in seven counties in southeast Michigan. Monroe has completed conflation this week. Thirty- nine of the conflation areas in Wayne County have been completely conflated. The one remaining area will be done next week. They expect Macomb and Oakland counties will be completed in about a month. This involves cleaning up errors that occur during conflation. Gil Chesbro, MDOT, asked if Livingston, St. Clair, and Washtenaw counties have been delivered to the MIC.

Delores Muller, SEMCOG, responded that they have been.

Rob Surber, MIC, noted that the MIC is working on Washtenaw County in Phase 2a. Because this is an urban area, it will provide a picture of work issues in other SEMCOG counties.

D. Other Framework Initiatives

1. Hydrography / Reach

Rob Surber, MIC, stated that there has been a proposal from a Hydro Working Group (including state agencies, federal agencies, and organizations around the state) to look at the hydrographic layer of the state's base map to assign centerline base attributions. The group is especially interested in putting the EPA Reach coding schemes on the map feature at 1:24,000 scale and have it integrated with the rest of map. Reach coding is a referencing system that the EPA uses to hook their data in a manner similar to the way PRs are hooked to data. The lessons learned in the conflation of MALI will help this process. This is a framework-like activity - a lot of folks use this data and want to look at it on the map and relate it to their models. There is a lot of interest at the state, federal, regional, and county levels as well as by other organizations that look at understanding the hydro issues in the state. This attribution will also allow agencies to share information more easily. If all parties use the same standards then they will not have to redevelop when they want to integrate data. The U.S.G.S. is interested. The National Hydro data set is one of their priorities. There is a conference call scheduled with U.S.G.S. for next Thursday. The framework for the state is not necessarily going to focus only on transportation, but will also focus on other features like hydro, political boundaries, etc. which is of interest to the GIS user community at large. There will be a demonstration / tour with the U.S. Army Corps of Engineers to talk about their involvement. Paul Sielbock, MDNR, sent a

proposal to interested agencies. The hydro proposal states that we will take the Reach data for two or three state watershed areas and process it through the framework base. Then they can determine what the problems might be, what the processes are, what the scope might entail. There is interest in putting eco system information on the Reach. They will look at those issues. Rob hopes to get an idea of what it might take to do the rest of the state and may propose that the U.S.G.S. be involved and possibly cost share. Rob will update as this progresses. If anybody is interested in being a part of this group, there is an open invitation, contact Rob.

Bill Enslin, MSU Center for Remote Sensing and GIS, commented that there are unique components to this, in that the Reach files have a hierarchical system which orders streams and small tributaries to the mouths of rivers. A lot of the nodes are sampling point and monitoring stations, so there is a wealth of attribute data that can be associated. Gil Chesbro, MDOT, asked if this includes agricultural drainage ditches or just naturally occurring drainage places.

Rob Surber, MIC, responded that he thinks it is only naturally occurring drainage places. Drainage ditches from the topos are in there. They had discussions with some of the drain commissions around the state as to how they might be able to help better attribute the drainage features. Hillsdale County is providing input to the framework base and they would like that information corrected and improved. At this time, the MIC is unsure of how they will communicate change.

Everett Root, MIC, commented that the Hillsdale county drain commissioner has section maps of all the drains they are responsible for. A lot of framework drains will have names that will differ from the local names.

Rob Surber, MIC, added that they originally thought they would use the official name as identified in the geographic names and have an alias that the locals can refer to. That will work well in the framework model. Then users can query to find a certain feature.

Joyce Newell, MDOT, added that the drains would be a unique feature in that they tend to go underground on occasion.

Everett Root, MIC, responded that they would designate under ground and above ground. Many drains have survey points, actual measurements where they cross the road.

Rob Surber, MIC, stated that MDOT has not been a part of the effort to merge the Reach and framework. They feel that MDOT participation might be important because of the bridges and roads.

Gil Chesbro, MDOT, agreed that it is important for MDOT to participate. They are paying fees in the millions of dollars to county drain commissions because MDOT roads drain into county drains.

Steve Perry, SEMCOG, asked if when looking at Reach codes would they be looking at flow direction.

Rob Surber, MIC, responded that they would be. Rob will continue to let the group know how things progress.

2. Digital Ortho Quads (DOQs)

Rob Surber, MIC, stated that we are trying to coordinate at the state level to avoid double dipping. They want to make DOQs available to all state agencies.

II. Michigan State Government Geographic Information Policy Council

A. State Agency Survey Development

Rob Surber, MIC, reported that a representative from each state department met a few weeks ago. These are policy level people. Out of this meeting came a need for an analysis of geographic information. A needs assessment survey of data producers and users will be developed by volunteers representing MDOT, MDNR, Michigan State Police, DMB, DEQ. Then they can look at prioritization of data sets and how we can cooperate at the state level to better coordinate at the federal and regional levels. The goal is to avoid duplication of efforts. There will be an opportunity for all state agencies to comment on the survey. Rob is hopeful that this survey can tie in with other surveys being done by IMAGIN, SEMCOG, etc.

B. Framework Demonstration

Rob Surber, MIC, reported that another item that came out of the Michigan State Government Geographic Information Policy Council meeting is that a lot of state departments don't have an understanding of what the framework concept is about. In many cases they haven't seen geographic information in map form and don't know how to work with it. The MIC has set up a framework demonstration to be held in the Library of Michigan in the Forum Room on Nov. 19, from 1:30-4 p.m. This is an open invitation. There will be a question and answer time. In the council meetings, members are beginning to realize the possible ways they may be able to use GIS information.

Eric Swanson, MIC, commented that in many departments GIS is happening on a project basis in a program level versus departmental level. The Department of Education representative didn't know about GIS, but during the discussion he discovered that his information would benefit others. People are beginning to look at GIS more as an enterprise-wide solution to many departmental issues.

III. MDNR Projects and Activities

Nothing to report.

IV. MDOT Projects and Activities

Joyce Newell, MDOT, reported that MDOT is working on a memorandum of agreement with Michigan State Industries (MSI) to do attribution. They visited MSI's GIS shop, was impressed, and convinced that the prisoners can do a good job. Attribution is adding to the framework information regarding who owns the roads, which legal system it is, classification, and where the bridges are. MDOT is planning to meet with MIC about doing a linear referencing system for rail. This will involve converting the current system to the framework. The rail crossing staff has a proposal to identify all rail crossings on the map. If the framework cannot be used, they will develop their own maps. Some of MDOT's staff together with MIC demonstrated to the Traffic Management System (TMS) staff that data could be converted from 1994 MALI to the framework with ease and accuracy. The TMS coordinator was excited and breathed a sigh of relief thinking that this part of his job will be easier.

V. MIC Projects and Activities

1. National Spatial Data Information (NSDI) Clearinghouse

Rob Surber, MIC, stated that the MIC is working on the NSDI clearinghouse activities. The clearinghouse, in geographic terms, is a place on the Internet to find out what information is available by area, topic, or theme. It uses the power of the Internet to search by key words

and requires that information be in a certain form. The quality of data, coverage of data, date of information, etc. is included on the site - it is sort of a 'truth in labeling.' The NSDI clearinghouse is a geospatial information superhighway for the country. Michigan has a grant to create a node for the state as a place to find geospatial information for Michigan. We are partnering with IMAGIN to pool resources and expertise to provide a better product for the state. It's designed to not only have Metadata, but will also include information about people and resources, experts (personal, private, and public) on subject matters. This is designed to be a long-term commitment. It will be a dynamic and people will want to keep their information there. It will save time and money from having to answer questions over the phone. A survey is being developed to target, not only IMAGIN members but other data producers, data providers, and data creators. SEMCOG wants to tie their council into this effort. They will be working with IMAGIN and MIC to be sure that their information needs are being met by the survey. The survey will be out as soon as possible. Eric Swanson will meet with IMAGIN to discuss the details.

Delores Muller, SEMCOG, asked if there were any nodes that Rob would like to model the Michigan node after. For example, Montana has a lot of good information.

Rob Surber, MIC, responded that they have been looking at the different nodes and will try to take the best features to use within the context of the needs of our state. The main goal is to make the node more than just a search on key words, it should be able to do geographic searches. Sophisticated clearinghouse searching tools are the direction they want to take. The first year will involve getting a handle on what information we have and making it available. They plan to tie into the state government survey and will link to sites of federal agencies, etc.

Lorri Peltz-Lewis, MNFI, asked if there would also be a survey about Metadata.

Rob Surber, MIC, responded that it is important to use Metadata and will also be using DataLogr to get the information into compliant form. Rob hopes to be able to use the Metadata that has already been developed and not have to reinvent the wheel.

2. Statewide Land Database – Executive Information System (EIS)

Eric Swanson, MIC, stated that for the last 1½ years there has been an effort underway at the state level to create a system to allow query of state land holdings (property and buildings, leased or owned.) This is a joint effort between numerous state agencies. The primary departments are Dept. of Management and Budget, Dept. of Transportation, Dept. of Natural Resources, Military Affairs and Dept. of Community Health maintain their own properties. The Dept. of Management and Budget manages most of the properties for most state agencies. The system will provide a location point on the map for leased/owned buildings and show core attributes about the buildings (square footage, which department resides in it, number of employees.) At this time, parts of information are located in about six agencies. The EIS system creates a common core infrastructure. It will not be a system designed to manage the state's real estate transactions or business, but it will be an inventory system that will allow for general query. The data will be matched to the framework and will be accessible via the web. The first phase will begin this fiscal year and will be phased-in as agencies' databases become available to be brought in efficiently.

Rob Surber, MIC, added that this would be a visible project for framework. People who use base maps understand its importance. For others, when you start putting their business on the base map, they can then see that it is a useful tool for policy, planning, or inventory of holdings.

Eric Swanson, MIC, explained that the state went through a process with the high level Business Area Analysis (BAA.) The BAA looked at the state's real estate business and the key players. It never got into any technical design or detail specifications, which could only

be implemented if the state had a desire to centralize all real estate, which they don't have. The high level BAA, lead by Doug Jester, MDNR, is complete. There is an immediate need to develop the Executive Information System (EIS) which is an inventory of common attributes, not full attributes or the most volatile attributes, but basic information about land and buildings.

Bill Enslin, MSU Center for Remote Sensing and GIS, inquired whether the resources for the current effort would be for one year, three years?

Eric Swanson, MIC, responded that fiscal year 1999 is covered and that he put in an estimate for fiscal year 2000. In essence this is a two-year effort with a phased-in completion. They anticipate being able to connect live to MDNR's real estate system via the 40 acres quarter quarter grid. There are approximately 800 state-owned and 1,200 leased buildings across the state. The attributes change frequently. Most of the reverted lands are managed through the MDNR resource system, which can then be matched by the 40 acre quarter quarter grid, in urban areas it can be done by address. The design specs need to be worked out. For example, the MIC mapped all the tax reverted properties in the City of Detroit. In order to do that, it was necessary to work with MDNR and the city assessors' office. At this time, agencies will not be forced to change overnight, but will identify standardized items that they will be requested to maintain as they implement the new system.

Rob Surber, MIC, stated that they would be working with how to communicate change over time.

Eric Swanson, MIC, added that a maintenance schedule would be developed to deal with any changes in leasing.

Rob Surber, MIC, added that it would not be a live system but a strategic sort of system. Information will be remapped and then made available. It will be better than what we have now.

VI. MDEQ Projects and Activities

Nothing to report.

VII. SEMCOG Projects and Activities

Steve Perry, SEMCOG, reported that there is a free FOIA workshop offered at the MSU Extension at Square Lake Road tomorrow. The workshop is sponsored by Oakland County, Wayne County, and SEMCOG and will discuss enhanced access, data sharing, and copyright issues. There will be two sessions - a morning session (which requires pre-registration) and an afternoon session. SEMCOG is beginning to prepare for their year 2000 flight for land use and road update for southeast Michigan. They plan to put the request for purchase (RFP) out this summer and do a spring 2000 flight and an update fall 2000. They want to try to scan to increase turn around time.

VIII. Tri-County Regional Planning Commission Projects and Activities

Melissa Scott, Tri-County Planning, reported that they are working with Wayne State University on a transit model.

Rob Surber, MIC, added that a transit study, using framework, is being done for 14 counties around the state.

IX. MSU Center for Remote Sensing and GIS Projects and Activities

Bill Enslin, MSU Center for Remote Sensing and GIS, reported that DEQ is funding a project to develop a training program to teach people from the Source Water Assessment Program (SWAP) how to use the framework data. Universities across the state are working with county health departments to try to put together a more understandable framework than the raw bits and bites that come out of the file.

One process being worked on is to look at the quality of the data relative to the MIRIS files. The Center met with MIC to go over discrepancies between MIRIS and framework files. They have reviewed the road network and hydrography for three counties: Ingham, Eaton, and Barry. Overall it is a good product. There are some problems in isolated cases where the road shapes are different and with roads being identical but the level code is different (the MIRIS level number for the road is now a zero instead of one of the MIRIS level numbers.) The hydrography had a line generalization that has occurred in MIRIS prior to MDOT and MIC getting files. Vertices of lines have dropped (a few feet different) so that shapes of rivers and lakes are different than what they were initially in the files that went out to some of the counties.

The second part of the process is to develop tools to help people more readily use the framework data in their applications, particularly agencies that aren't expert users. They have been developing tools using Map Objects to work with shape files. The themer tool is an aggregation of TIGER files and the original MIRIS, so you have attribution in the sense of knowing what the lines were in MIRIS and you have codes that represent what the Census Bureau thought the lines were also. The theme field allows you to collapse the two together and copy the level number for those lines that have a MIRIS level number and then where it is zero (without a MIRIS corresponding code) take CFCC TIGER code and remap it to a comparable level number field. The problem is that the Census line work isn't coded properly, but at least you can get it into one field and theme out types of roads, rivers, drains, and other features. The second part of the program allows theme check boxes for voting districts, school districts, etc. and it will create different shape files. In the completion stage, the project will have a build routine where it can build a polygon.

The third aspect of the themer program allows users to create separate related tables to parcel out the 144 fields. There is a default - the initial line table codes that are relevant to MDOT, Census, MIC conflation codes. The software allows you to drop any of the fields and custom designed one. The idea is to develop tools to make it easy for people to create new data sets. The output of the themer product is 20 individual shape files, set up for each type of line framework file, and will revise the LandScan viewer to use framework files to provide control to bring up a theme map. You can then select images by zooming in on the map and picking a point. The embellishments will make it a more easily readable product. They are collecting data from MIRIS that has not gotten into the framework files (utilities, pipe lines, power lines, airports.) They brought in files from the Geographic Names Information System, a U.S.G.S. file, which has places (historical, schools, churches, cemeteries, etc.) There are hundreds of these places per county and they come up as a circle icon. This is one application from the framework file.

Joyce Newell, MDOT, asked if there are additional attributions, such as national classifications, would they be added to the themer.

Bill Enslin, MSU, responded that it is written with a master table containing fields that are not imbedded in the software, so they would only have to add or modify one table.

Delores Mueller, SEMCOG, commented that this sounds like an extensive tool. And asked if the MIC is planning to build another tool or planning to couple because of the application with the data.

Rob Surber, MIC, added that this is originally being designed for the SWAP program. The MIC is sending out the Frameworks Program, which is a Map Objects viewing tool allowing the building of themes funneled with ArcExplorer. It is a software product that will ask questions, the user will check boxes, and the software will build what is selected, and the user can then view in ArcExplorer. This program is not as involved as the Center's. They don't want to duplicate anything. They are providing as many ways as possible right now so that people can get their hands on it and look at it. The main approach with the current tools is a 'getting to know you' operation. Some users

know TIGER and they could say 'show me what TIGER looks like on this.' Some users know MIRIS and they could say 'show me what MIRIS look like on this.' The user decides how they want to use it. This is more of an introductory viewing tool for those who don't want to look at fields and formatting.

Eric Swanson, MIC, commented that the MIC was an exhibitor at the counties and locals GIS conference. They had a sign-up sheet for people who were interested in getting a copy of a county framework file (at whatever stage it is currently in.) There were requests for 50 county files. That started the sessions with Bill Enslin, at the Center, to pull this together.

Rob Surber, MIC, stated that the Center has done more than the MIC as far as options, but they unsure when it will be available. The MIC's product is available now.

X. County/Local Projects and Activities

Dave Tijerina, City of Lansing, reported that MSI digitized their maps. They are looking at the feasibility of purchasing GPS (global position system) units. They are looking at all the ramifications of getting GPS equipment and GPS points throughout the city. Dave asked if MSU has a base station.

Gil Chesbro, MDOT, responded that MSU does have a base station and it allows you to post process because of the selective availability. The commercial GPS units are not as accurate as military units, but you can download a file from MSU that will allow you to correct errors.

Cary Adranga, MSI, asked what the radius is.

Gil Chesbro, MDOT, responded that there is not much of a radius, but the further out the further degraded the correction is. The Coast Guard gets real time differential, which tries to correct at the same time you are collecting a satellite signal. It is not as accurate as post- processing, but it is pretty good. You need real time differential if using in a mobile unit. You can do both – use real time out in the field and then go back and post-process.

XI. U.S. Census Bureau Regional Office TIGER Update

Nothing to report.

XII. Federal Projects and Activities

Cathy Keenan, USDA – DRCS, stated that they are getting ready to implement ArcView.

XIII. Other Issues

Rick Comstock, Consumers Energy, reported that the gas and electric sections are moving forward to develop GIS using ESRI product. They have funding to develop a pilot project to put transmission lines and gas lines into GIS. There was a meeting with ESRI where they presented their solutions. They are working with Microstation MGE to develop the use of Geomedia. They want to put Geomedia on the desktops of some engineers.

Rob Surber, MIC, asked where Rick sees the environmental section fitting in with ESRI and the electric and gas folks.

Rick Comstock, Consumers Energy, replied there are meetings and discussions. Nobody is really in charge right now to make decisions. They are looking at ArcView. The problem is that the whole company is a microstation shop. When it comes to GIS and tying in all data bases and attributes, everyone is all over the board.

Rob Surber, MIC, commented that the framework is a statewide effort to put map feature to centerline. Detroit Edison has expressed a need to have that type of information for routing as another type information for their business. What sort of environment needs does Consumer Energy have, are they collecting centerline? Would the gas and electric be more interested in that part of it?

Rick Comstock, Consumers Energy, responded that he was sure they would. The transmission lines are part of the utility and can't change the base, but could have them included. They are presently using the MIRIS base map and the company's base map which is a detached road system. Rick commented that he prefers to work with MIRIS even though it is based on 1970 topo maps and has errors. He can make a lot of corrections by going out in the field. He thinks they want to keep moving forward and acquiring latest basemap information. Rick commented that he can see a potential working relationship with the State of Michigan. They just need a more driving force from the leadership to pull it together. Consumers Energy covers most of the lower peninsula.

Lorri Peltz-Lewis, Michigan Natural Feature Inventory (MNFI), stated they are trying to upgrade their database. They have a BCD biological centric data base that they are moving into Oracle. It will interface through ArcView through a program called Biotics that the Nature Conservancy has put together. They will be digitizing polygon boundaries for endangered/threatened species. They are hoping to start in December.

Jim Best, MSI, stated that they are anxiously awaiting the memorandum of agreement with MDOT. They have four counties from MDOT ready to go and two counties almost ready. They worked on Mecosta County (which had already been completed) as practice. They had questions that were answered by MDOT and MIC – it was a matter of understanding what needs to be done.

Cary Adranga, MSI, stated that getting people involved that really know the business (MDOT and the City of Lansing for example) helps break down stereotypical images the prisoners to be able to do digitizing work helps to break down stereotypical barriers People can see how prisoners can be integral part of the program and why it is so important. Prisoners get to do something while in prison and have something to use when they are back in society. There are ads in the papers all the time for GIS people. This is a minimum two-year program with State of Michigan and will look great on their resumes.

Rob Surber, MIC, stated that he saw that MSI has a competitive process for the prisoners to get into the program. There is a lot of screening involved.

XIV. Next Meeting Date

December 10, 1998, 10 a.m. until 12 p.m., Lewis Cass Building, 6th Floor, North Wing, Dept. of Community Health, Director's Conference Room